

REPORT  
Regular Council Meeting  
1989 March 20

THE CORPORATION OF THE DISTRICT OF BURNABY  
ENVIRONMENT AND WASTE MANAGEMENT COMMITTEE

HIS WORSHIP, THE MAYOR  
AND ALDERMEN:

RE: RECYCLING UPDATE

Recommendation:

1. THAT Council receive this report for information purposes.

R E P O R T

The Environment and Waste Management Committee, at its meeting held 1989 March 07 received an update report from the Director Engineering on recycling activities in Burnaby.

The Director Engineering reported as follows:

- "1. Provincial Government

With respect to the Ministry of Environment's discussion paper on the provincial role in municipal solid waste management, and the subsequent public meetings held by the Solid Waste Management Task Force, Burnaby staff have had verbal discussions with Ministry staff resulting in the following information:

- Ministry of Environment staff were quite surprised at the response to their discussion paper. It appeared to them that the public had much higher expectations regarding recycling than did Solid Waste Managers.
  - As a consequence, their discussion paper has undergone dramatic and significant changes and will include a 'very comprehensive program to facilitate municipalities to embark on short and long range solid waste management plans'.
  - This new paper will contain over 70 recommendations, will define the roles of the various levels of government (Municipal, Regional, Provincial and Federal) as well as the capabilities of each, may include hazardous waste in the solid waste management plan required of municipalities and/or regional districts and finally, may include changes to the Litter Act regarding bottle deposits (unlikely though).
2. City of Vancouver

The City of Vancouver has recently (1989 February 21) committed itself to a multi material residential recycling program. The proposed program is based on one household container for newspaper, glass, metals and plastic, with separation into separate bins being done during collection. The weekly pickup will be by City of Vancouver crews with processing and marketing to be contracted privately. The proposed program is to be phased in over 15 months.

INTERNAL DISTRIBUTION:  
:- AGENDA 1989 MARCH 20  
:- COPY - MUNICIPAL MANAGER  
- DIRECTOR ENGINEERING  
- DIRECTOR PLANNING & BLDG. INSPECTION  
- CHIEF PUBLIC HEALTH INSPECTOR

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The annual operating cost of this program is estimated to be \$1.1 million, which includes 14 vehicles, containers, advertising, vehicle operators and administrative staff.

3. G.V.R.D.

The Regional District's consulting engineers, MacLaren Engineers, have produced an outline for the recycling interim discussion paper which is to be submitted to the District's Water and Waste Management Committee meeting on 1989 March 09. A copy of this outline is attached as APPENDIX "1".

4. Corporation Initiatives

Although many of the details regarding recycling initiatives are dependent upon the results of the Provincial Ministry of Environment's Solid Waste Management Task Force and the recycling strategy to be adopted by the Regional District, Corporation staff are proceeding concurrently with several initiatives, namely:

a) Stride Avenue Recycling Depot

Participation has been averaging about 20 cars per day. Waste oil is being added as a recyclable as well as waste paper, old newsprint and cardboard. The feasibility of adding plastics is being investigated.

b) Office Paper Recycling

An additional 1600 kgs was recycled from the Municipal Hall during the month of January. This represents a noticeable increase in participation, which started at about 600 kgs per month.

Responses from staff regarding suggestions as to how to best utilize the revenue received from this program include:

- spend revenue on recycling initiatives;
- purchase a suitable recycling bin for the printshop;
- establish a recycling depot for municipal employees at the hall.

The response was less than enthusiastic with only 5 replies received.

c) Multi Material Curbside Collection

Staff are undertaking research into how to best implement a multi material curbside collection program such that a program can be formulated once the Regional District and Provincial inputs are identified. Topics identified as requiring detailed investigation include:

- Materials to be Collected: Assume initially:
  - paper
  - cardboard
  - glass (unsorted)
  - metal cans (tin and aluminum)

(Ultimately expand to include plastic and yard/garden wastes)

- Collection vehicle:
  - type of vehicle
  - one/two man
  - new/used
  - costs

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- Collection Routes:

- number and relative location
  - impact on existing collection routes
  - weekly/biweekly
  - same day as regular collection?
  - costs
- Containers:
- number and type
  - cost
- Expansion of Service to Apartments/CoOps/Stratas
- Pilot Project - Scope, Location, Implementation Details"

The Environment and Waste Management Committee recommended the update information contained in this report be brought to Council's attention for information purposes.

Respectfully submitted,

Alderman J.M. Sawicki  
Chair

Alderman D.R. Corrigan  
Member

Alderman D.P. Drummond  
Member



## McLaren Engineers

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20 February 1989

Mr. T. Allee, P.Eng.  
Assistant Engineer  
Greater Vancouver Regional District  
4330 Kingsway  
Burnaby, B.C.  
V5H 4G8

Dear Mr. Allan:

Re: Outline for Recycling Discussion Paper

Attached please find a copy of our outline for the recycling discussion paper to be completed by March 9th, 1989.

As previously discussed, the intent of the discussion paper is to provide the GVRD with a good conceptual overview of the collection and processing options currently available. In addition, as highlighted in the outline, education and promotion, market issues and beyond curbside options such as demolition waste and household hazardous wastes will all be dealt with in this discussion paper.

In formulating this discussion paper, a number of assumptions have been made:

- o Since the paper will be made available for general distribution it will not be technical in nature but will be more conceptual.
- o Although the paper deals with all aspects of program operation, it is assumed that the individual municipalities will be responsible for the collection of materials, not the GVRD.
- o The intent of this paper is to stimulate further discussions and that no major recommendations on jurisdictional issues, etc., will be made at this time, but will be included in the final report.
- o The feedback received as a result of the scheduled public and council meetings will be taken into account when producing the final report.

I sincerely hope that the attached outline meets with your approval. If you have any questions or comments please do not hesitate to call.

Yours very truly,

APPENDIX "1"



## Maclaren Engineers

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### GVRD RECYCLING STRATEGY

#### Discussion Paper Outline

February 1989

#### Contents

1. Introduction to Discussion Paper
2. Waste Reduction Education
3. Source Separation
4. Processing
5. Market Development
6. Program Promotion
7. Program Option Evaluation Criteria
8. Other Issues

#### 1. Introduction to Discussion Paper

##### A. Brief History & Status of Programs

##### B. Problem Definition

- per capita generation
- costs
- environmental impacts

##### C. Mass Balance Chart Illustrating Current Sources & Disposal Methods

##### D. Overall Planning Perspective

- systems approach
- sustainable development
- integration of solid waste activities within other systems and planned projects, such as energy conservation and transportation

##### E. Pose the Question: "Where does GVRD go from here?"

#### 2. Waste Reduction Education

*This section consists of options and programs which can be instituted to reduce or eliminate waste before entering the solid waste disposal system.*

##### A. Home Composting

- \* information
- outreach program
- \* audits
- supply bins

**B. Institutional/Industrial/Commercial Technical Assistance**

- information
- site visits/audits
- incentives/disincentives

**C. Alternative Waste Management Resource Center & Demonstration Site**

- hotline
- theme park
- library/information center
- technology expo

**D. Consumer Awareness**

- selective purchasing
- bulk buying
- reuse

**E. Encouraging Industry to Produce Environmentally Responsible Packaging**

- promotion/education
- incentives/disincentives
- regulation

**F. Institutionalization of Sustainable Economic Development**

- institutionalize the concept of sustainability as the foundation for all planning and economic development within the region
- establish environmental criteria for policy making and program development

**G. Waste Exchanges**

- hazardous waste
- construction/demolition
- commercial/industrial

**3. Source Separation**

*This section contains descriptions of various collection options for source separated materials from all generator types.*

**A. Drop/Depot**

- disposal facilities
- apartment
- industrial parks/malls to collect commercial recyclables
- shopping center/grocery store to collect residential recyclables
- schools/drives
- theme park
- rural
- special collection days for bulky items, household hazardous waste, etc.

**B. Buy-back**

- mobile buy-back
- industrial
- theme center
- redemption system for containers, tires, batteries, etc.

**C. Residential Curbside**

- yard waste
- wet/dry
- co-mingled
- separated multiple bin

**D. Institutional/Industrial/Commercial Collection**

- compostables
- wet/dry
- co-mingled
- separated multiple bin

**4. Processing**

*This section includes a summary of all processing options available for the sorting and separation of recovered materials for end market use.*

**A. Material Processing Systems**

- pre-sorted recyclables
- co-mingled recyclables
- wet/dry
- yard waste
- food waste/other organics
- recovery from mixed garbage
- demolition/construction waste
- household hazardous waste/small quantity hazardous waste
- municipal solid waste composting
- co-composting municipal solid waste with sewage sludge
- white good detoxification

**B. Incinerator Preprocessing**

- toxic removal
- heating value adjustment
- waste stream equalization

**C. Product Retrofit & Resale**

- batteries
- appliances
- furniture

**5. Market Development**

*This section summarizes the options which can be considered for expanding existing markets and developing new ones.*

- A. Expanding Existing Export & Local Markets**
- identify existing regional and international markets
  - provide incentives to private sector for expansion of existing capacity
  - require minimum level of recovered materials as a component of the manufacturing process

- remove Incentives for use of virgin materials
- Inventory products made from recycled materials and produce a directory for consumer use

#### B. Stimulating Demand

- develop GVRD procurement policy including specifications for recovered material use in public works projects (i.e.: compost, asphalt, plastic lumber)
- provide procurement policy development assistance to municipalities and to private sector organizations
- develop and manage a clearinghouse for recycled products (hotline, newsletter, directory)

#### C. Developing New Markets

- evaluate and quantify potential new uses for materials recovered from solid waste (assess displacement impact on existing markets)
- identify new technologies/industries able to convert recycled waste into new products:

##### Paper:

- fuel products
- pyrolysis
- diesel conversion
- methanol/ethanol production
- methane generation
- compost
- bedding
- insulation
- packaging
- construction materials such as roofing felt, drywall, etc.

##### Glass:

- glassphalt
- fiberglass
- aggregate
- reflective paint for roads
- cement concrete

##### Metals:

- wet cell batteries
- dry cell batteries
- salvage and recovery processing of marginal value materials

##### Plastic:

- mixed plastics
- fibre-fill
- pelletizing of reclaimed plastics
- upgrading through sorting and cleaning mixed plastics
- carpet



Wood:

- epoxy composites for non-compostable wood waste
- mulch
- fuel
- compost

Masonry Products:

- aggregate
- fill

Compost:

- topsoil
- landfill cover
- land reclamation
- compost gabions (organic sound barriers for highways/landscaping)
- fertilizer
- vermiculture composting

Rubber Tires:

- asphalt
- mats/astroturf
- fuel
- roofing
- new rubber products

Textiles:

- rags

Carpet, Furniture, Mattresses:

- shred and sort

Household Hazardous Wastes, Small-Quantity Hazardous Wastes:

- paint and solvent recovery
- create incentives to encourage expansion and/or development of new market capacity:
  - tax
  - R&D grants
  - loans
  - enterprise zones
  - technical assistance
- develop minimum performance standards for products made from recycled materials.

6. Program Promotion

*The following highlights actions which can be taken to promote various public and private sector waste reduction and recycling programs.*

A. Promotion

- theme and logo
- advertising/media campaign

- "cash for trash" lottery
- contests
- awards
- direct marketing via phone or mail

#### B. Outreach

- theme park
- block leader program
- volunteer training and utilization
- speakers bureau
- school programs
- cooperate with local colleges and universities to integrate a resource management program within their curriculum:
  - research
  - policy analysis/development
  - training
- canvass

### 7. Program Option Evaluation Criteria

*The following is a list of suggested criteria which can be used to evaluate the previous program options.*

- cost effectiveness
- employment potential
- potential for diversion
- impact on existing recycling activities
- environmental impacts
- market displacement
- ease of integration into existing waste management system
- convenience
- public visibility

### 8. Other Issues

*Once GVRD narrows its choices of program options for further evaluation in the final report, the following issues will also be addressed:*

- funding options
- potential roles
- policy choices
  - rates
  - land use codes
  - material specific disposal bans
  - diversion credits
- coordination with private sector initiatives